

Better Buildings Residential Network Peer Exchange Call Series:

Energy Efficiency Funding for Residential Programs: Challenges and Opportunities July 23, 2020



Agenda and Ground Rules

- Agenda Review and Ground Rules
- Opening Poll
- Residential Network Overview and Upcoming Call Schedule
- Featured Speakers:
 - Christine Gerbode, ACEEE
 - Fei Wang, Wood Mackenzie
 - Mishel Filisha, NYSERDA
- Open Discussion
- Closing Poll and Announcements

Ground Rules:

- Sales of services and commercial messages are not appropriate during Peer Exchange Calls.
- Calls are a safe place for discussion; please do not attribute information to individuals on the call.

The views expressed by speakers are their own, and do not reflect those of the Dept. of Energy.





Better Buildings Residential Network

Join the Network

Member Benefits:

- Recognition in media and publications
- Speaking opportunities
- Updates on latest trends
- Voluntary member initiatives
- One-on-One brainstorming conversations

Commitment:

Members only need to provide one number: their organization's number of residential energy upgrades per year, or equivalent.

Upcoming Calls (2nd & 4th Thursdays):

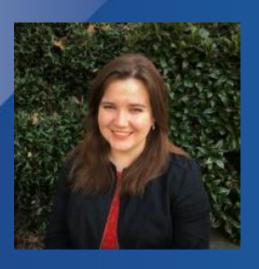
- Aug 13: The State of Energy Efficiency Programs: Where Are We Now?
- Aug 27: No Call

Peer Exchange Call summaries are posted on the Better Buildings website a few weeks after the call

For more information or to join, for no cost, email bbresidentialnetwork@ee.doe.gov, or go to energy.gov/eere/bbrn & click Join







Christine Gerbode

American Council for an Energy-Efficient Economy



Braiding Energy and Health Funds for In-Home Programs: Federal Funding Opportunities

Christine Gerbode, Senior Research Analyst, Health and Environment American Council for an Energy-Efficient Economy

DOE Better Buildings Residential Network Peer-Exchange Call

July 23, 2020





The American Council for an Energy-Efficient Economy is a nonprofit 501(c)(3) founded in 1980. We act as a catalyst to advance energy efficiency policies, programs, technologies, investments, & behaviors.

Our research explores economic impacts, financing options, behavior changes, program design, and utility planning, as well as US national, state, & local policy.

Our work is made possible by foundation funding, contracts, government grants, and conference revenue.

aceee.org @ACEEEdc

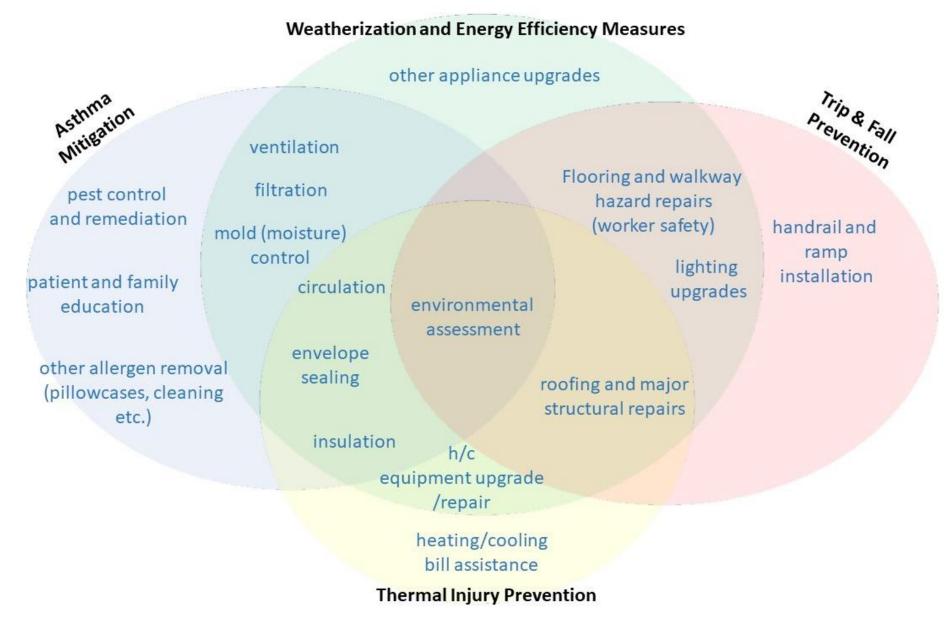


Using Health Funding to Expand Residential EE Programs

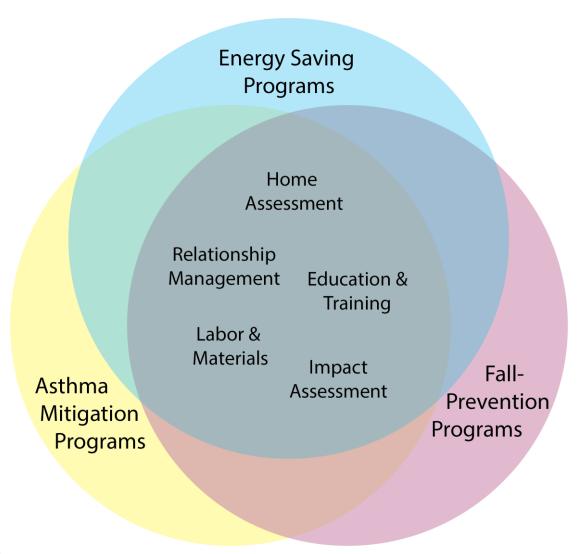
- EE programs can positively impact the health of participants
- Opportunity
 - Health sector spending is trillions of dollars a year
 - There is a desire to address health preventively
 - Existing network of EE programs offer a network for delivery that health sector needs
- Additional benefits of incorporating health-focused funding into EE programs:
 - Drive referrals to energy retrofitting programs
 - Reduce deferrals due to health & safety issues
 - Document and evaluate impacts -> additional support
 - Better serve customers and meet a public health need!



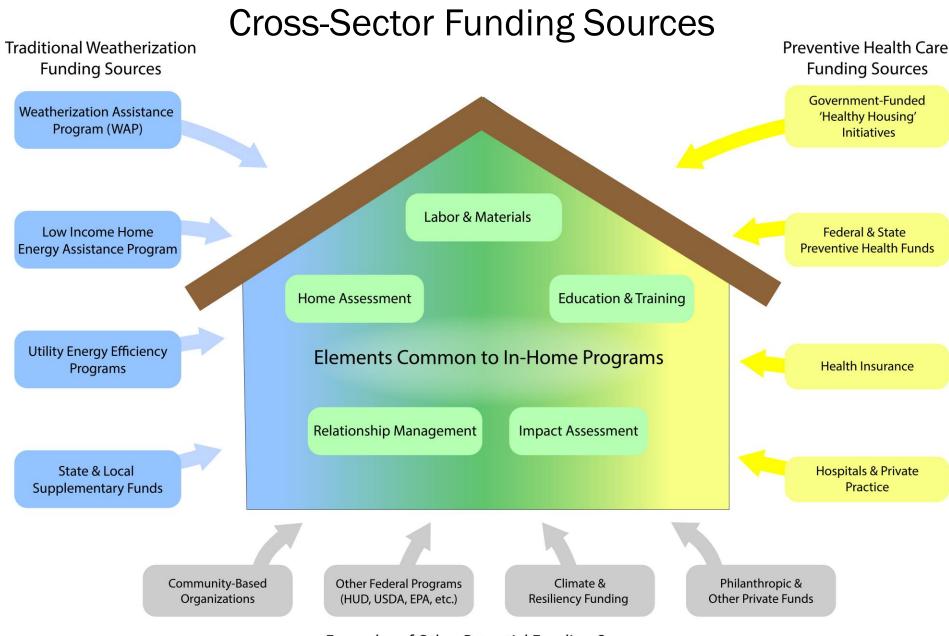
Potential Overlap of In-Home EE and Health Services



Potential to Braid Funding and Program Infrastructure







BRAIDING ENERGY AND HEALTH FUNDING FOR IN-HOME PROGRAMS: FEDERAL FUNDING OPPORTUNITIES

By Sara Hayes and Christine Gerbode



Potential Federal Health Funding Opportunities

Name of opportunity	Agency	Scale of funding
Medicaid	CMS (HHS)	\$593 billion annual budget; potential for preventive spending uncapped
CHIP Health Services Initiative (HSI)	CMS (HHS)	Annual fund, with approximately \$956 million available nationwide in 2018; amounts vary by state based on total CHIP budget and administrative costs
Preventive Health and Health Services Block Grant (PHHSBG)	CDC (HHS)	\$147 million disbursed in 2019 as part of an annual grant cycle
Social Impact Partnerships to Pay for Results Act (SIPPRA) Grants	Dept. of the Treasury	\$100 million to be awarded as one-time grants in multiple funding rounds; next round will award approximately \$10 million
Lead Hazard Control Grants	OLHCHH (HUD)	\$324 million total, awarded as renewable grants of \$1 million- 9.1 million that can be used over five years
National Asthma Control Program (NACP)	CDC (HHS)	\$70 million available in 2019 awarded as five-year grants; grants have been awarded to approximately 24 states with funding scaled to population (\$100,000-800,000/year/per state)



Medicaid

- Dollars can be used to deliver services either through direct funding of programs or reimbursement for services
- Largest potential source of funds we have identified
- Two main mechanisms we are seeing so far:
 - 1. Alter State Medicaid Plan
 - State Plan Amendment (permanent)
 - 1115 Waiver (temporary)
 - 2. Work through Managed Care Organizations (MCOs)
 - Negotiate with MCO to use discretionary funds
 - State modifies contract with MCO to deliver in-home services.



Children's Health Insurance Program

- States can allocate unspent administrative funds to pay for programs through a health services initiative
- Millions of dollars potentially available in many states, scaled to CHIP program funding, which varies by population
 - Potential HSI matching funds are highest in California (>~\$200M), lowest in Wyoming (<\$1M)
- Only 24 states had taken advantage of this mechanism as of early 2020, and at least 20 states recently had around 40% or more of their potential HSI funds still available

(see Families USA et al. brief for a list of states; based on FY2017)

Has been used to support healthy-homes-related work



Other Potential Opportunities

- Preventive Health and Health Services Block Grants
 - Wide latitude for states to develop innovative programs or evaluate existing ones
- Lead Hazard Control Grants and Healthy Homes Funds
 - Several related grants and supplementary funds; braiding is encouraged
- Social Impact Partnerships Pay-for-Results Act Grant
 - New program, some delays due to CARES Act response
- National Asthma Control Program
 - Funds coordinating infrastructure and in-kind support in certain states



Getting Started

- Include Program Elements to Attract Health-Focused Funding
 - Adding health-related services can position a program to qualify for new funding sources
 - Meeting the unique needs of the community can open doors for locally-focused public health funding
 - Measure, quantify, and monetize impacts!
 - Build strong partnerships
- Target Funding Sources Aimed at Improving Both Health and Social Welfare
 - EE can improve health and social well-being in a wide variety of ways
 - EE program network can deliver non-energy services



Getting Started (cont'd)

Address Equity

- Low-income and communities of color face disproportionate health harms from inadequate housing conditions, climate change, and air pollution
- Designing programs to serve these communities may make the biggest difference in terms of health benefits

Look for New Opportunities

- Check for new programs and grants and updates to existing opportunities
- Especially in light of COVID-19, we may see an increased focus on both holistic public health and healthy housing



ACEEE Resources

 Braiding Energy and Health Funds for In-Home Programs: Federal Funding Opportunities (July 2020)

https://www.aceee.org/research-report/h2002

 Making Health Count: Monetizing the Health Benefits of In-Home Services Delivered by Energy Efficiency Programs (May 2020)

https://www.aceee.org/research-report/h2001

 Protecting the Health of Vulnerable Populations with In-Home Energy Efficiency: A Survey of Methods for Demonstrating Health Outcomes (October 2019)

https://www.aceee.org/research-report/h1901



2020-2021 Initiatives in the Works

- Program Design Cohort: new network to connect program implementers and administrators trying to incorporate health measures into energy efficiency programs in homes
 - Contact cgerbode@aceee.org for more info or to join
- Bridging Health and Energy Efficiency Working Group: learning group developing cross-sector communication tools
 - To sign up for updates and future web sessions and news, email BHEE@aceee.org



2020-2021 Initiatives in the Works

- Regional Trainings: one-day meetings to support local networks and expertise sharing, timeline TBD
 - Let us know if you would like to see one of these in your region!
- Policy analysis and advocacy: supporting state and local advocates to identify and pursue policy changes that will facilitate the braiding of health and energy resources





Thank you!

Please feel free to reach out with any questions, comments, or feedback to Christine Gerbode at:

cgerbode@aceee.org





Fei Wang *Wood Mackenzie*



Energy Efficiency Funding for Residential Programs: Challenges and Opportunities Residential Building Electrification

July 23, 2020

Fei Wang

Research Manager, Grid Edge Fei.Wang@woodmac.com







Market evolutions and technology revolutions have disrupted legacy business models, creating a new energy landscape

The Power Market of the Past

A top-down flow from supply to demand



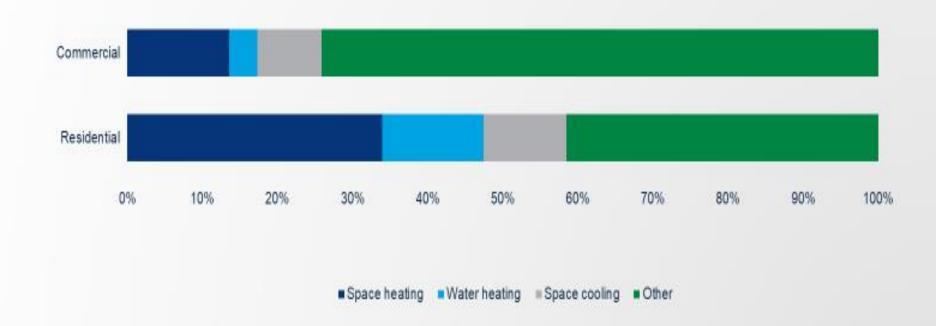
Tomorrow's Decarbonized and Decentralized Power Market

A bidirectional energy network with new technologies and actors at every node reshaping power market planning and operations



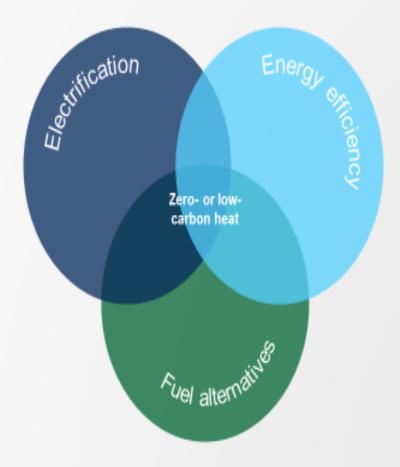
Building electrification targets space and water heating

Total energy consumption by end use in the U.S.



Source: U.S. Energy Information Administration, Annual Energy Outlook 2020

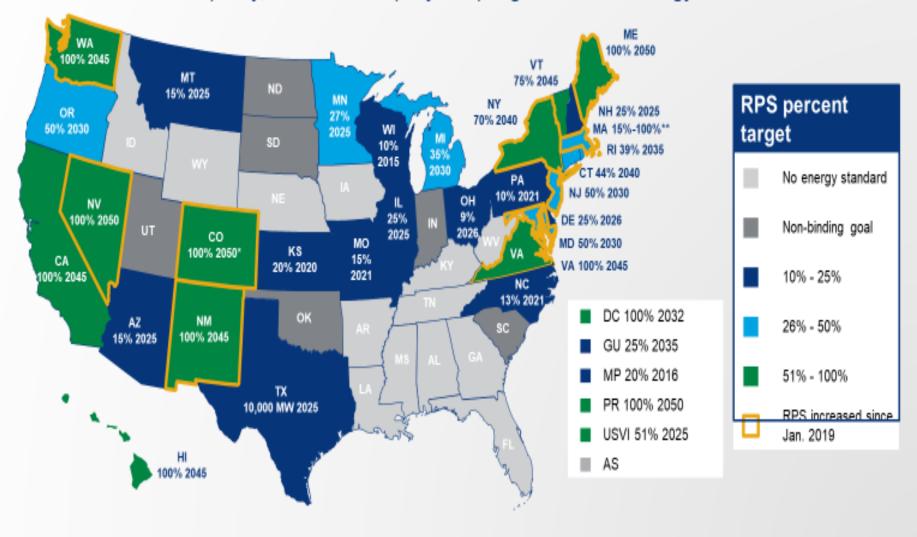
Electrification is one way to decarbonize residential and commercial heat



Source: Wood Mackenzie Energy Transition Service/Grid Edge Service

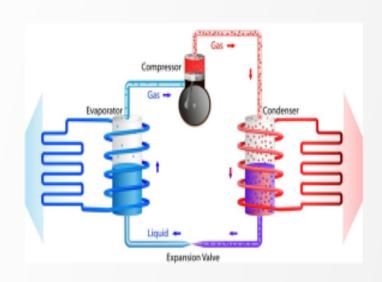
United States: Renewable and clean energy standards by state

Even without federal policy, the U.S. is rapidly adopting renewable energy mandates



Heat pumps, commercially available, are the most efficient

Illustration of a heat pump and efficiency levels of heating technologies

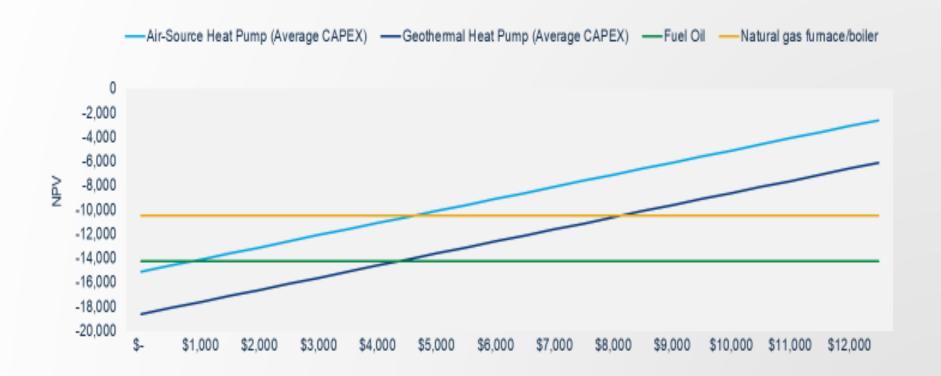


Heating technology	EE required for Energy Star
Oil/gas boilers	~90%
Gas furnaces	~90-95%
Oil furnaces	~85%
Air-source heat pumps	COP of 2.4-2.5

Source: U.S. Department of Energy; Energy Star

Policies with financial incentives are key

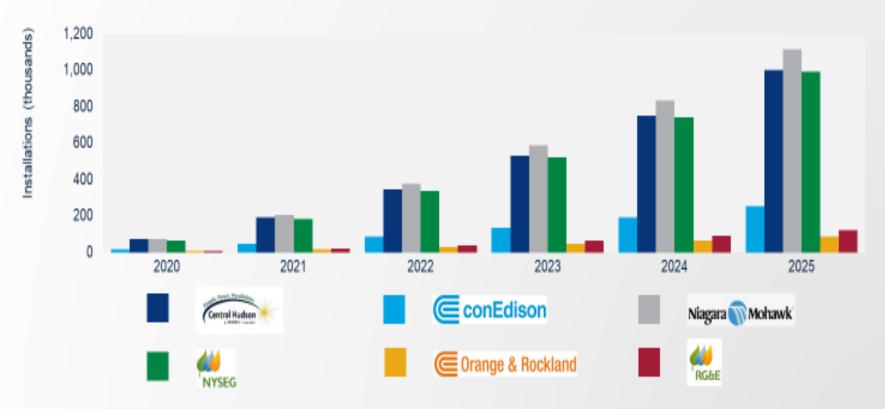
NPV of heat pumps per every additional \$500 of upfront incentives



Source: Wood Mackenzie Energy Transition Service/Grid Edge Service

New York Public Service Commission authorized utility energy efficiency and building electrification portfolios through 2025

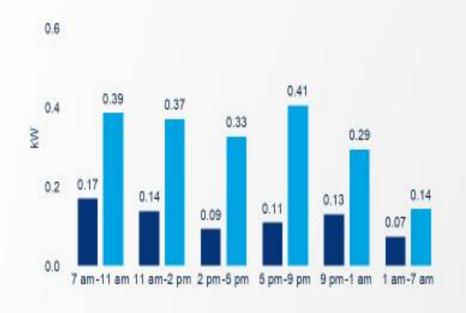
Cumulative heat pump installation targets by IOUs in New York

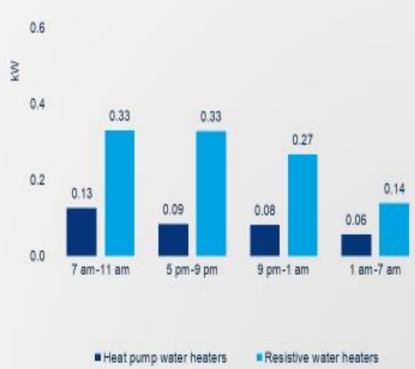


Source: New York Public Service Commission

Changes in appliance standards will lead to higher availability of efficient and gridinteractive water heaters

Average shed/shift benefits for a 3hour event, spring 2018 Average shed/shift benefits for a 4hour event, summer 2018



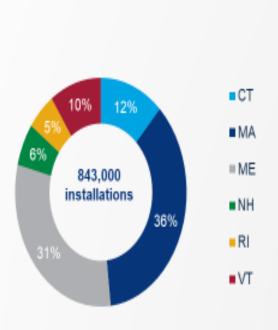


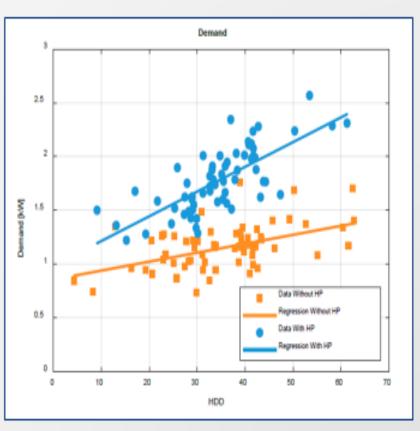
Source: Bonneville Power Administration, CTA-2045 Water Heater Demonstration Report

Heat pumps' impact on summer and winter peak demand

Analysis of heat pumps' impact on load by Independent System Operator New England (ISO-

NE)

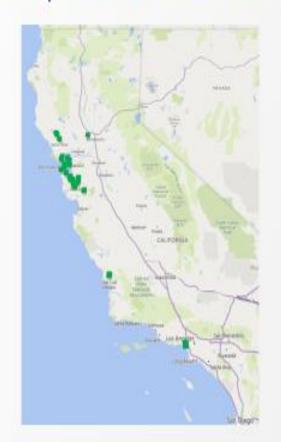




Source: Independent System Operator New England

Municipalities have been moving forward with building electrification

Regions with pro- and anti-electrification regulations





Source: Wood Mackenzie Energy Transition Service/Grid Edge Service; Sierra Club

Mishel Filisha
New York State Energy Research & Development
(NYSERDA)



Opportunities for Funding Energy Efficiency and Energy-Plus-Health Interventions within New York State Medicaid's Value-Based Payment Framework

July 23, 2020

U.S. Department of Energy, Better Building Residential Network



NYS Medicaid's Value-Based Payment Reform

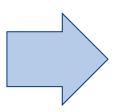


System Reform to Payment Reform

Delivery System Reform Incentive Payment (DSRIP) Program

Reduce avoidable hospital use by 25%

- Integrate delivery systems
- Breakdown siloes
- Enhance primary and community-based care
- Integrate behavioral and physical health



Value-Based Payment (VBP)

- Align incentives
- Focus on outcomes
- Improve efficiency & quality

Paying for <u>outcomes</u> not inputs

Key Principles of NYS Medicaid VBP

- I. Improve the overall quality of care
- II. Focus on the root causes of poor health
- III. Evaluate appropriate levels of care
- IV. Improve the patient experience
- V. Create a mechanism to reinvest in our health care system
- VI. Reduce cost and increase efficiency
- VII. Enable and encourage innovation

Value-Based Payment Roadmap



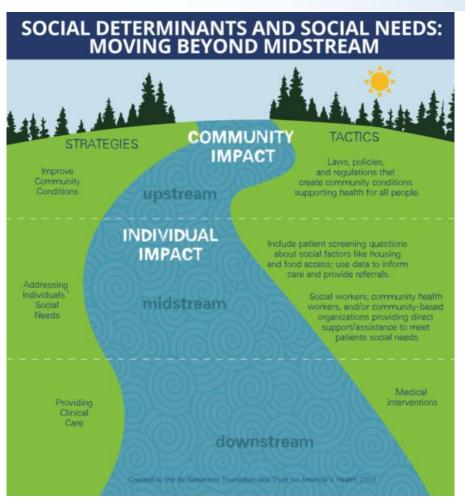
VBP Guidance and Requirements

New York State Roadmap for Medicaid Payment Reform September 2019: Year 5

A Path toward Value Based Payment: Annual Update

https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/vbp_library/2020/docs/2019-09_final_vbp_roadmap.pdf

Social Determinants of Health as a Driver



Through VBP we can address social determinants of health that cause poor health care outcomes by:

- Tackling conditions upstream and midstream
- Using patient centered care models
- Screening for SDH
- Investing dollars into fresh food, transportation, housing
- Leveraging community-based organizations to effect change

<u>Source</u>: NYS Department of Health. Office of Health Insurance Programs. 2020. Joint presentation with NYSERDA. Building Performance Association 2020 Northeast Regional Home Performance Conference. Saratoga Springs, NY.

Social Determinants of Health and Community-Based Organization Requirements

- 1. All new and existing VBP Level 2 & 3 arrangements MUST include:
 - A. At least one Social Determinant of Health Intervention
 - B. At least one Tier 1 Community Based Organization (this does <u>not</u> exclude Tier 2 and 3 CBOs)
- 2. MCOs must provide upfront funds or start up funding to the provider/CBO for the social determinants of health intervention.
- 3. The MCO/VBP Contractor may decide on their own SDH intervention. Interventions should be measurable and able to be tracked and reported to the State. SDH Interventions must align with the five key areas of SDH, which includes:
 - 1) Education, 2) Social, Family and Community Context, 3) Health and Healthcare 4) Neighborhood & Environment and 5) Economic Stability
- 4. VBP Level 2 & 3 contracts without SDH and CBO requirements will not meet the definition of VBP.

Contracting



CBO Contracting Options

- CBO contracts are <u>not</u> required to include risk
- CBO contracts must include upfront funds for startup costs
- CBO contracts could be structured as:

Payment for services rendered

Contracts without a risk-based component

Upside only

No downside risk

If savings are achieved, CBO receives a portion of shared savings

If losses are incurred, CBO would **not** take on any losses

Upside and Downside risk

Risk sharing contract

If savings are achieved, CBO receives a portion of shared savings

If losses are incurred, CBO would take on some degree of loss

Most contracts are structured as "payment for services rendered".

Key Items for Contracting (1/2)

Contract Term

- What is the "Effective Date" of the contract and when does it end?
- Does the contract automatically renew after the initial period?

Contracting Parties

- Who are you contracting with, the MCO or VBP Contractor (Hospital, IPA,ACO)?
- Use the legal names for each entity in your contract

Scope of Project

- Describe your project implementation
- What services will be provided by the CBO?
- How many people will the intervention target? All members in the arrangement?
 Members that meet specific requirement?
- Will the MCO or VBP Contractor identify targeted members and refer members as needed?
- How will you evaluate/measure success?

Key Items of Contracting (2/2)

Geographical Area

What area(s) will the intervention cover

Data Sharing Agreement

- CBO contracts must include an agreement to share member data to allow:
 - > targeting SDH intervention to yield the most impact.
 - evaluating intervention outcomes.

Payment Method

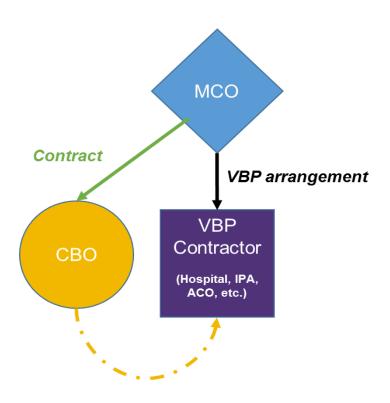
- How will your organization get paid? Lump sum? Monthly or quarterly reimbursement.
- Are payments or bonus payments tied to specific measures and outcomes? i.e. number of referrals made, number of visits or contact hours, number of patient who are successfully reconnected to healthcare provider.

Reporting and Data Collection

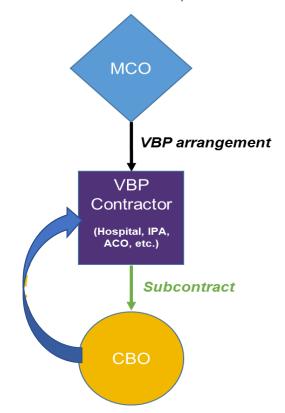
- How often are reports due?
- What data points are collected?
- How will you track the people that are served in the intervention?

CBO Contracting Examples (1/2)

A. Contracting directly with an MCO to support a VBP arrangement



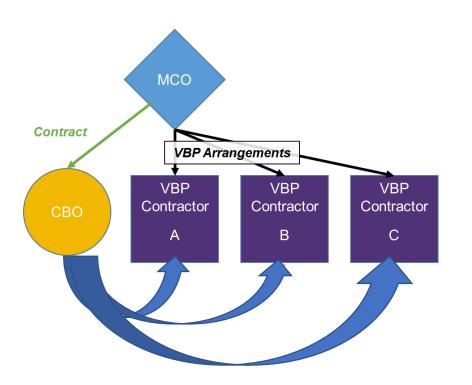
B. Subcontract with a VBP Contractor (Hospital, IPA, ACO, etc.)



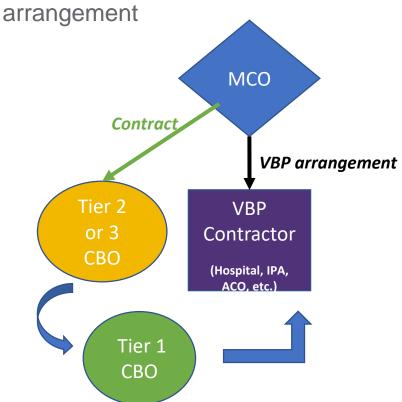
Source: NYS Department of Health. Office of Health Insurance Programs. 2020. Joint presentation with NYSERDA. Building Performance Association 2020 Northeast Regional Home Performance Conference. Saratoga Springs, NY.

CBO Contracting Examples (2/2)

C. Contracting directly with an MCO to support <u>multiple</u> VBP arrangements



D. Multi-tier CBO partners contracting directly with an MCO to support a VBP arrangement



<u>Source</u>: NYS Department of Health. Office of Health Insurance Programs. 2020. Joint presentation with NYSERDA. Building Performance Association 2020 Northeast Regional Home Performance Conference. Saratoga Springs, NY.

Questions to Consider Before Contracting

- 1) Know what you can do going in:
 - Are you looking for a smaller project with option to grow? Or can you handle a bigger scale?
 - Do you have the ability to invest in new staff, technology, data collection, etc.?
 - Do you have the ability to deliver on ALL aspects of contract? (reporting, health screening, incomplete services and so much more)
- 2) Do you need to hire appropriate legal counsel or leverage pro-bono legal services
- 3) Start the conversation formal or informal and follow-up
- 4) Are you willing to use other funding streams to supplement the contracting arrangement or do you expect direct payment through a contract for services?
- 5) Even with direct contracting, do you have the resources to cover your cost your cost if there is a lag in payment?
- 6) Know how much of your cost you are willing to absorb should payment be predicated on outcomes.
- 7) What determines walking away?

Contact

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Better Buildings Summer Webinar Series





https://betterbuildingssolutioncenter.energy.gov/better-buildings-webinar-series





Explore the Residential Program Solution Center

Resources to help improve your program and reach energy efficiency targets:

- Handbooks explain why and how to implement specific stages of a program.
- Quick Answers provide answers and resources for common questions.
- Proven Practices posts include lessons learned, examples, and helpful tips from successful programs.
- Technology Solutions NEW! present resources on advanced technologies, HVAC & Heat Pump Water Heaters, including installation guidance, marketing strategies, & potential savings.



https://rpsc.energy.gov





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